



General

Guideline Title

ACR Appropriateness Criteria® left lower quadrant pain — suspected diverticulitis.

Bibliographic Source(s)

McNamara MM, Lalani T, Camacho MA, Carucci LR, Cash BD, Feig BW, Fowler KJ, Katz DS, Kim DH, Smith MP, Tulchinsky M, Yaghmai V, Yee J, Rosen MP, Expert Panel on Gastrointestinal Imaging. ACR Appropriateness Criteria® left lower quadrant pain -- suspected diverticulitis [online publication]. Reston (VA): American College of Radiology (ACR); 2014. 7 p. [39 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Miller FH, Rosen MP, Lalani T, Baker ME, Blake MA, Cash BD, Fidler JL, Greene FL, Hindman NM, Jones B, Katz DS, Kaur H, Qayyum A, Small WC, Sudakoff GS, Tulchinsky M, Yaghmai V, Yarmish GM, Yee J, Expert Panel on Gastrointestinal Imaging. ACR Appropriateness Criteria® left lower quadrant pain - suspected diverticulitis. [online publication]. Reston (VA): American College of Radiology (ACR); 2011. 5 p. [33 references]

Recommendations

Major Recommendations

ACR Appropriateness Criteria®

Clinical Condition: Left Lower Quadrant Pain—Suspected Diverticulitis

Variant 1: Typical clinical presentation for diverticulitis, suspected complications or atypical presentations.

Radiologic Procedure	Rating	Comments	RRL*
CT abdomen and pelvis with contrast	9	For this procedure oral and/or colonic contrast may be helpful for bowel luminal visualization.	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
Rating Scale: 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate			*Relative Radiation Level

Radiologic Procedure	Rating	Comments	RRL*
CT abdomen and pelvis without and with contrast	5		
MRI abdomen and pelvis without contrast	5		O
MRI abdomen and pelvis without and with contrast	5	See statement regarding contrast in the text below under "Anticipated Exceptions."	O
X-ray contrast enema	4		
US abdomen transabdominal graded compression	4		O
X-ray abdomen and pelvis	4		
US pelvis transvaginal	2		O
<u>Rating Scale:</u> 1,2,3 Usually not appropriate; 4,5,6 May be appropriate; 7,8,9 Usually appropriate			*Relative Radiation Level

Note: Abbreviations used in the table are listed at the end of the "Major Recommendations" field.

Summary of Literature Review

Introduction/Background

The most common cause of left lower quadrant pain in adults is acute sigmoid and/or descending diverticulitis. It has been estimated that between 10% and 25% of patients with diverticulosis will ultimately develop diverticulitis. Appropriate imaging triage for patients with suspected diverticulitis (i.e., left lower quadrant pain) should address two major clinical questions: 1) What are the differential diagnostic possibilities in this clinical situation? and 2) What information is necessary to make a definitive management decision? Some patients with acute diverticulitis may not require any imaging, notably those with typical symptoms of diverticulitis (e.g., left lower quadrant pain and tenderness) without suspected complications or those with a previous history of diverticulitis who present with clinical symptoms of recurrent disease. In few instances, such patients are treated medically without undergoing radiologic examinations, but diverticulitis can be simulated by other acute abdominal disorders. Patients with diverticulitis may require surgery or interventional radiology procedures because of associated complications, including abscesses, fistulas, obstruction, or perforation. As a result, there has been a trend toward greater use of medical imaging to confirm the diagnosis of diverticulitis, evaluate the extent of disease, and detect complications before deciding on appropriate treatment.

Abdominal radiography is of limited value in evaluating diverticulitis unless complications such as free perforation (pneumoperitoneum) or obstruction are suspected. Nuclear medicine imaging has no role in the evaluation of left lower quadrant pain. The role of magnetic resonance imaging (MRI) has not been adequately evaluated, but preliminary data suggest that it may have diagnostic potential in patients with suspected diverticulitis. The imaging examination most widely used for diagnosing diverticulitis is computed tomography (CT), but graded compression ultrasound (US), barium enema, and MRI have also been used.

Barium Enema

In the past, contrast enema was the primary imaging examination for diverticulitis but has been supplanted by CT. Diverticulitis is mainly an extramucosal process, and contrast enema shows the secondary effects of inflammation on the colon and will not show extraluminal abnormalities such as abscesses and pericolonic inflammation. Barium enema is also more invasive and is not as sensitive for extracolonic pathology. Although

CT has replaced the contrast enema as the initial imaging examination for diverticulitis, the contrast enema may be helpful in some instances as a follow-up study for evaluation for suspected fistula or for surgical planning after treatment.

Computed Tomography

CT is now nearly universally used as the imaging examination of choice for evaluating patients with suspected descending or sigmoid colon diverticulitis because of its high sensitivity and specificity and its ability to demonstrate other causes of left lower quadrant pain that mimic diverticulitis. It is widely available, reproducible, and has a reported overall accuracy of 99%. CT has a major role for depicting extracolonic disease extent; this assessment is rarely possible with a contrast enema. By revealing the presence and extent of abscess formation, CT facilitates selection of patients for medical rather than surgical therapy and determination if hospitalization is required. When abscesses are present, it has been shown that US- and CT-guided percutaneous drainage of abscess collections can eliminate multistage operative procedures and, in some cases, can eliminate the need for surgery entirely. Finally, CT can demonstrate extracolonic diseases (e.g., genitourinary and gynecologic abnormalities) which have a similar clinical presentation. One prospective study reported that contained perforation or abscess formation were detected with an accuracy of 96% (sensitivity 100%, specificity 91%) and 98% (sensitivity 100%, specificity 97%), respectively. Additionally, diagnoses other than diverticulitis as a cause of abdominal pain were correctly diagnosed using CT. CT reveals the alternative diagnosis of epiploic appendagitis which can clinically present similarly. The imaging of premenopausal women with acute pelvic pain is discussed in the National Guideline Clearinghouse (NGC) summary [ACR Appropriateness Criteria® acute pelvic pain in the reproductive age group](#).

A variety of contrast media have been used for CT to optimize the sensitivity and specificity of the examination, including oral and intravenous contrast agents and rectally administered contrast or air, although regardless of the technique used the accuracy is high for depicting findings of acute diverticulitis. Low-dose CT techniques can achieve radiation dose reduction of 75% to 90% compared with that of standard-dose abdominal multidetector row CT, with similar sensitivity and specificity. Intravenous and oral contrast may aid in delineation of abscesses. Prior to abdominal abscess drainage, imaging with administration of intravenous and enteric contrast may minimize the risk of nontarget catheter placement.

CT and/or CT fluoroscopy is also advantageous for guiding abscess drainage, particularly in cases in which collections are small and deep, in close proximity to vital structures, and located in regions that are difficult to access.

Ultrasound

Although most of the reported experience has been with CT, some authors advocate transabdominal sonography as an alternate technique for evaluating patients with suspected diverticulitis. Graded-compression sonography is reported to have a sensitivity of 77% to 98% and a specificity of 80% to 99% in diagnosing diverticulitis. One meta-analysis study suggested that graded-compression US and CT are both effective initial diagnostic tools but that CT is more likely to reveal alternative diagnoses for left lower quadrant pain, with sensitivity for alternate diagnoses ranging between 33% and 78% for US and between 50% and 100% for CT. In a direct comparison of CT to US, one study reported a sensitivity of CT in detecting diverticulitis to be significantly higher than that of US: 81% versus 61% ($P=0.048$), with CT missing fewer cases than US. Transvaginal sonography is of particular value when left lower quadrant pain and fever occur in women of childbearing age. In this setting, gynecologic processes such as ectopic pregnancy and pelvic inflammatory disease are also important diagnostic considerations. Sonography is therefore an excellent choice for the initial imaging of this patient population. CT may be used when US is equivocal, when a nongynecologic etiology is suspected to be the cause of low abdominal pain, or when a global view of a gynecologic disease process is needed. Graded-compression sonography for diverticulitis is a technique that is highly operator dependent, requiring a high level of expertise. US for diverticulitis is not widely used in the United States. Sonography is also much more dependent on body habitus than CT or MR.

US guidance for abscess drainage may be appropriate for larger and more superficial collections and provides the best visualization of direct needle advancement, septations, loculations, adjacent vascular structures, and pelvic collections via a transrectal or transvaginal approach. An inherent disadvantage is the inability of US to penetrate extensive overlying soft tissue or air-filled structures.

Magnetic Resonance Imaging

The role of MRI in the setting of left lower quadrant pain has been evaluated, and preliminary data suggest that it may have diagnostic potential in patients with suspected diverticulitis, with reported sensitivity of 86% to 94% and specificity of 88% to 92%. The findings for MRI are similar to those for CT, including demonstration of complications of diverticulitis, noting extraluminal air may be a subtle finding on MRI. There is a potential role for MRI in imaging younger patients with recurrent episodes of known or suspected diverticulitis in order to reduce radiation exposure, although it has not been systematically evaluated to the guideline panel's knowledge. The feasibility of this modality for the workup of acute left lower quadrant pain deserves consideration.

Special Considerations

Diverticulitis and Colon Cancer

Finally, it should be recognized that perforated colon cancer can mimic both the clinical and radiographic findings of diverticulitis. CT findings that suggest colon cancer rather than diverticulitis include the presence of pericolic lymphadenopathy (1 cm), with or without pericolic edema. The literature suggests that likelihood of occurrence of colon cancer is higher when abscess, local perforation, or fistula is identified. When there are inflammatory changes, edema in the root of the sigmoid mesentery, and no pericolic lymphadenopathy adjacent to a segment of thickened colon wall, the most likely diagnosis is diverticulitis. In patients with a CT diagnosis of diverticulitis, the prevalence of colon cancer more closely approximates the prevalence of colon cancer in the asymptomatic general population than in the symptomatic population. Routine colonoscopy after a CT diagnosis of acute left-sided diverticulitis is not warranted, with the exception of age-appropriate and clinically indicated colon cancer screening. For patients with findings suspicious for colon cancer on CT, colonoscopy is the preferred examination. In the future, less invasive examinations may become clinically relevant, including quantitative CT perfusion studies, diffusion-weighted MRI, and MR colonography.

Use of Oral and Rectal Contrast Media for CT

A retrospective review found no significant difference in the ability to correctly diagnose a suspected acute abdominal process when enhanced CT imaging was compared to unenhanced, with intravenous contrast alone the most frequent technique, followed by intravenous and oral contrast. Although contrast practices for abdominal/pelvic CT vary nationally, rectal contrast is rarely used. One study found the presence of perianastomotic air a reliable marker of anastomotic leaks at multidetector CT, and leakage of rectal contrast medium highly accurate and increasing confidence of diagnosis in evaluating colonic staple line leaks. Rectal contrast may have a limited role in evaluating for perforation or for leak after surgical intervention.

Summary

- CT is now nearly universally used as the primary imaging examination for evaluating acute sigmoid and/or descending colon diverticulitis because of its high overall accuracy and its ability to reveal the presence and extent of extracolonic disease that might warrant percutaneous catheter drainage or surgery.
- Abdominal radiography and barium enema play far less substantial roles and should not be used as the primary modality for the diagnosis.
- US has limitations in depicting diverticulitis and alternative diagnoses. Image-guided percutaneous drainage may be performed with US or CT in the appropriate clinical setting.
- MRI, while potentially effective in the diagnosis of diverticulitis, is not widely used for this purpose at present. No large prospective studies to the Panel's knowledge have compared MRI with CT in the diagnosis of diverticulitis.

Anticipated Exceptions

Nephrogenic systemic fibrosis (NSF) is a disorder with a scleroderma-like presentation and a spectrum of manifestations that can range from limited clinical sequelae to fatality. It appears to be related to both underlying severe renal dysfunction and the administration of gadolinium-based contrast agents. It has occurred primarily in patients on dialysis, rarely in patients with very limited glomerular filtration rate (GFR) (i.e., <30 mL/min/1.73 m²), and almost never in other patients. There is growing literature regarding NSF. Although some controversy and lack of clarity remain, there is a consensus that it is advisable to avoid all gadolinium-based contrast agents in dialysis-dependent patients unless the possible benefits clearly outweigh the risk, and to limit the type and amount in patients with estimated GFR rates <30 mL/min/1.73 m². For more information, please see the American College of Radiology (ACR) Manual on Contrast Media (see the "Availability of Companion Documents" field).

Abbreviations

- CT, computed tomography
- MRI, magnetic resonance imaging
- US, ultrasound

Relative Radiation Level Designations

Relative Radiation Level*	Adult Effective Dose Estimate Range	Pediatric Effective Dose Estimate Range
O	0 mSv	0 mSv
<input type="text"/>	<0.1 mSv	<0.03 mSv
<input type="text"/> <input type="text"/>	0.1-1 mSv	0.03-0.3 mSv
<input type="text"/> <input type="text"/> <input type="text"/>	1-10 mSv	0.3-3 mSv

Relative Radiation Level*					10-30 mSv Adult Effective Dose Estimate Range	3-10 mSv Pediatric Effective Dose Estimate Range
					30-100 mSv	10-30 mSv
*RRL assignments for some of the examinations cannot be made, because the actual patient doses in these procedures vary as a function of a number of factors (e.g., region of the body exposed to ionizing radiation, the imaging guidance that is used). The RRLs for these examinations are designated as "Varies."						

Clinical Algorithm(s)

Algorithms were not developed from criteria guidelines.

Scope

Disease/Condition(s)

Left lower quadrant pain, suspected diverticulitis

Guideline Category

Diagnosis

Evaluation

Clinical Specialty

Emergency Medicine

Family Practice

Gastroenterology

Internal Medicine

Obstetrics and Gynecology

Radiology

Surgery

Intended Users

Health Plans

Hospitals

Managed Care Organizations

Physicians

Utilization Management

Guideline Objective(s)

To evaluate the appropriateness of initial radiologic examinations for patients with left lower quadrant pain and suspected diverticulitis

Target Population

Patients with left lower quadrant pain and suspected diverticulitis

Interventions and Practices Considered

1. Computed tomography (CT) abdomen and pelvis
 - With contrast
 - Without contrast
 - Without and with contrast
2. Magnetic resonance imaging (MRI) abdomen and pelvis
 - Without contrast
 - Without and with contrast
3. X-ray
 - Abdomen and pelvis
 - Contrast enema
4. Ultrasound (US) abdomen
 - Transabdominal graded compression
 - Pelvis transvaginal

Major Outcomes Considered

- Utility of radiologic examinations in differential diagnosis
- Sensitivity, specificity, and diagnostic accuracy of radiologic examinations

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Literature Search Procedure

Staff search in PubMed only for peer reviewed medical literature for routine searches. Any article or guideline may be used by the author in the narrative but those materials may have been identified outside of the routine literature search process.

The Medline literature search is based on keywords provided by the topic author. The two general classes of keywords are those related to the condition (e.g., ankle pain, fever) and those that describe the diagnostic or therapeutic intervention of interest (e.g., mammography, MRI).

The search terms and parameters are manipulated to produce the most relevant, current evidence to address the American College of Radiology Appropriateness Criteria (ACR AC) topic being reviewed or developed. Combining the clinical conditions and diagnostic modalities or therapeutic procedures narrows the search to be relevant to the topic. Exploding the term "diagnostic imaging" captures relevant results for diagnostic topics.

The following criteria/limits are used in the searches.

1. Articles that have abstracts available and are concerned with humans.
2. Restrict the search to the year prior to the last topic update or in some cases the author of the topic may specify which year range to use in the search. For new topics, the year range is restricted to the last 10 years unless the topic author provides other instructions.
3. May restrict the search to Adults only or Pediatrics only.

4. Articles consisting of only summaries or case reports are often excluded from final results.

The search strategy may be revised to improve the output as needed.

Number of Source Documents

The total number of source documents identified as the result of the literature search is not known.

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Study Quality Category Definitions

Category 1 - The study is well-designed and accounts for common biases.

Category 2 - The study is moderately well-designed and accounts for most common biases.

Category 3 - There are important study design limitations.

Category 4 - The study is not useful as primary evidence. The article may not be a clinical study or the study design is invalid, or conclusions are based on expert consensus. For example:

- a. The study does not meet the criteria for or is not a hypothesis-based clinical study (e.g., a book chapter or case report or case series description).
- b. The study may synthesize and draw conclusions about several studies such as a literature review article or book chapter but is not primary evidence.
- c. The study is an expert opinion or consensus document.

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

The topic author drafts or revises the narrative text summarizing the evidence found in the literature. American College of Radiology (ACR) staff draft an evidence table based on the analysis of the selected literature. These tables rate the strength of the evidence (study quality) for each article included in the narrative text.

The expert panel reviews the narrative text, evidence table, and the supporting literature for each of the topic-variant combinations and assigns an appropriateness rating for each procedure listed in the table. Each individual panel member assigns a rating based on his/her interpretation of the available evidence.

More information about the evidence table development process can be found in the ACR Appropriateness Criteria® Evidence Table Development document (see the "Availability of Companion Documents" field).

Methods Used to Formulate the Recommendations

Expert Consensus (Delphi)

Description of Methods Used to Formulate the Recommendations

Rating Appropriateness

The appropriateness ratings for each of the procedures included in the Appropriateness Criteria topics are determined using a modified Delphi methodology. A series of surveys are conducted to elicit each panelist's expert interpretation of the evidence, based on the available data, regarding the appropriateness of an imaging or therapeutic procedure for a specific clinical scenario. American College of Radiology (ACR) staff distributes surveys to the panelists along with the evidence table and narrative. Each panelist interprets the available evidence and rates each procedure. The surveys are completed by panelists without consulting other panelists. The appropriateness rating scale is an ordinal scale that uses integers from 1 to 9 grouped into three categories: 1, 2, or 3 are in the category "usually not appropriate"; 4, 5, or 6 are in the category "may be appropriate"; and 7, 8, or 9 are in the category "usually appropriate." Each panel member assigns one rating for each procedure for a clinical scenario. The ratings assigned by each panel member are presented in a table displaying the frequency distribution of the ratings without identifying which members provided any particular rating.

If consensus is reached, the median rating is assigned as the panel's final recommendation/rating. Consensus is defined as eighty percent (80%) agreement within a rating category. A maximum of three rounds may be conducted to reach consensus. Consensus among the panel members must be achieved to determine the final rating for each procedure.

If consensus is not reached, the panel is convened by conference call. The strengths and weaknesses of each imaging procedure that has not reached consensus are discussed and a final rating is proposed. If the panelists on the call agree, the rating is proposed as the panel's consensus. The document is circulated to all the panelists to make the final determination. If consensus cannot be reached on the call or when the document is circulated, "No consensus" appears in the rating column and the reasons for this decision are added to the comment sections.

This modified Delphi method enables each panelist to express individual interpretations of the evidence and his or her expert opinion without excessive influence from fellow panelists in a simple, standardized and economical process. A more detailed explanation of the complete process can be found in additional methodology documents found on the [ACR Web site](#) (see also the "Availability of Companion Documents" field).

Rating Scheme for the Strength of the Recommendations

Not applicable

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

Internal Peer Review

Description of Method of Guideline Validation

Criteria developed by the Expert Panels are reviewed by the American College of Radiology (ACR) Committee on Appropriateness Criteria.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The recommendations are based on analysis of the current literature and expert panel consensus.

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

Selection of appropriate radiologic imaging procedures for evaluation and diagnosis of patients with left lower quadrant pain and suspected diverticulitis

Potential Harms

Gadolinium-Based Contrast Agents

Nephrogenic systemic fibrosis (NSF) is a disorder with a scleroderma-like presentation and a spectrum of manifestations that can range from limited clinical sequelae to fatality. It appears to be related to both underlying severe renal dysfunction and the administration of gadolinium-based contrast agents. It has occurred primarily in patients on dialysis, rarely in patients with very limited glomerular filtration rate (GFR) (i.e., <30 mL/min/1.73 m²), and almost never in other patients. Although some controversy and lack of clarity remain, there is a consensus that it is advisable to avoid all gadolinium-based contrast agents in dialysis-dependent patients unless the possible benefits clearly outweigh the risk, and to limit the type and amount in patients with estimated GFR rates <30 mL/min/1.73 m². For more information, please see the American College of Radiology (ACR) Manual on Contrast Media (see the "Availability of Companion Documents" field).

Relative Radiation Level

Potential adverse health effects associated with radiation exposure are an important factor to consider when selecting the appropriate imaging procedure. Because there is a wide range of radiation exposures associated with different diagnostic procedures, a relative radiation level (RRL) indication has been included for each imaging examination. The RRLs are based on effective dose, which is a radiation dose quantity that is used to estimate population total radiation risk associated with an imaging procedure. Patients in the pediatric age group are at inherently higher risk from exposure, both because of organ sensitivity and longer life expectancy (relevant to the long latency that appears to accompany radiation exposure). For these reasons, the RRL dose estimate ranges for pediatric examinations are lower as compared to those specified for adults. Additional information regarding radiation dose assessment for imaging examinations can be found in the ACR Appropriateness Criteria® Radiation Dose Assessment Introduction document (see the "Availability of Companion Documents" field).

Qualifying Statements

Qualifying Statements

The American College of Radiology (ACR) Committee on Appropriateness Criteria and its expert panels have developed criteria for determining appropriate imaging examinations for diagnosis and treatment of specified medical condition(s). These criteria are intended to guide radiologists, radiation oncologists, and referring physicians in making decisions regarding radiologic imaging and treatment. Generally, the complexity and severity of a patient's clinical condition should dictate the selection of appropriate imaging procedures or treatments. Only those examinations generally used for evaluation of the patient's condition are ranked. Other imaging studies necessary to evaluate other co-existent diseases or other medical consequences of this condition are not considered in this document. The availability of equipment or personnel may influence the selection of appropriate imaging procedures or treatments. Imaging techniques classified as investigational by the U.S. Food and Drug Administration (FDA) have not been considered in developing these criteria; however, study of new equipment and applications should be encouraged. The ultimate decision regarding the appropriateness of any specific radiologic examination or treatment must be made by the referring physician and radiologist in light of all the circumstances presented in an individual examination.

Implementation of the Guideline

Description of Implementation Strategy

An implementation strategy was not provided.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

IOM Domain

Effectiveness

Identifying Information and Availability

Bibliographic Source(s)

McNamara MM, Lalani T, Camacho MA, Carucci LR, Cash BD, Feig BW, Fowler KJ, Katz DS, Kim DH, Smith MP, Tulchinsky M, Yaghmai V, Yee J, Rosen MP, Expert Panel on Gastrointestinal Imaging. ACR Appropriateness Criteria® left lower quadrant pain -- suspected diverticulitis [online publication]. Reston (VA): American College of Radiology (ACR); 2014. 7 p. [39 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

1996 (revised 2014)

Guideline Developer(s)

American College of Radiology - Medical Specialty Society

Source(s) of Funding

The American College of Radiology (ACR) provided the funding and the resources for these ACR Appropriateness Criteria®.

Guideline Committee

Committee on Appropriateness Criteria, Expert Panel on Gastrointestinal Imaging

Composition of Group That Authored the Guideline

Panel Members: Michelle M. McNamara, MD (*Principal Author*); Tasneem Lalani, MD (*Co-author and Panel Vice-chair*); Marc Anthony Camacho, MD; Laura R. Carucci, MD; Brooks D. Cash, MD; Barry W. Feig, MD; Kathryn J. Fowler, MD; Douglas S. Katz, MD; David H. Kim, MD; Martin P. Smith, MD; Mark Tulchinsky, MD; Vahid Yaghmai, MD, MS; Judy Yee, MD; Max P. Rosen, MD, MPH (*Panel Chair*)

Financial Disclosures/Conflicts of Interest

Not stated

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Miller FH, Rosen MP, Lalani T, Baker ME, Blake MA, Cash BD, Fidler JL, Greene FL, Hindman NM, Jones B, Katz DS, Kaur H, Qayyum A, Small WC, Sudakoff GS, Tulchinsky M, Yaghmai V, Yarmish GM, Yee J, Expert Panel on Gastrointestinal Imaging. ACR Appropriateness Criteria® left lower quadrant pain - suspected diverticulitis. [online publication]. Reston (VA): American College of Radiology (ACR); 2011. 5 p. [33 references]

Guideline Availability

Electronic copies: Available from the [American College of Radiology \(ACR\) Web site](#) .

Print copies: Available from the American College of Radiology, 1891 Preston White Drive, Reston, VA 20191. Telephone: (703) 648-8900.

Availability of Companion Documents

The following are available:

- ACR Appropriateness Criteria®. Overview. Reston (VA): American College of Radiology; 2013 Nov. 3 p. Electronic copies: Available from the [American College of Radiology \(ACR\) Web site](#) .
- ACR Appropriateness Criteria®. Literature search process. Reston (VA): American College of Radiology; 2013 Apr. 1 p. Electronic copies: Available from the [ACR Web site](#) .
- ACR Appropriateness Criteria®. Evidence table development – diagnostic studies. Reston (VA): American College of Radiology; 2013 Nov. 3 p. Electronic copies: Available from the [ACR Web site](#) .
- ACR Appropriateness Criteria®. Radiation dose assessment introduction. Reston (VA): American College of Radiology; 2013 Nov. 3 p. Electronic copies: Available from the [ACR Web site](#) .
- ACR Appropriateness Criteria®. Manual on contrast media. Reston (VA): American College of Radiology; 90 p. Electronic copies: Available from the [ACR Web site](#) .
- ACR Appropriateness Criteria®. Procedure information. Reston (VA): American College of Radiology; 2013 Apr. 1 p. Electronic copies: Available from the [ACR Web site](#) .
- ACR Appropriateness Criteria® left quadrant pain — suspected diverticulitis. Evidence table. Reston (VA): American College of Radiology; 2014. 14 p. Electronic copies: Available from the [ACR Web site](#) .

Patient Resources

None available

NGC Status

This summary was completed by ECRI on March 19, 2001. The information was verified by the guideline developer on March 29, 2001. This summary was updated by ECRI on November 11, 2004. The information was verified by the guideline developer on December 21, 2004. This summary was updated by ECRI on March 21, 2006. This summary was updated by ECRI Institute on June 23, 2009. This summary was updated by ECRI Institute on January 13, 2011 following the U.S. Food and Drug Administration (FDA) advisory on gadolinium-based contrast agents. This summary was updated by ECRI Institute on February 22, 2012 and July 16, 2014.

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